



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.            | CONFIRMATION NO.       |
|---|-------------|----------------------|--------------------------------|------------------------|
| 10/551,703  | 05/31/2006  | Wijadi Jodi          | 00758.1507USWO                 | 5910                   |
| 23552 7590 04/30/2007<br>MERCHANT & GOULD PC<br>P.O. BOX 2903<br>MINNEAPOLIS, MN 55402-0903 |             |                      | EXAMINER<br>GONZALEZ, MADELINE |                        |
|   |             |                      | ART UNIT<br>1723               | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>04/30/2007        | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/551,703

Applicant(s)

JODI, WIJADI

Examiner

Madeline Gonzalez

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 24-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/30/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24, 36 and 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiman (U.S. 3,142,612).

With respect to **claim 24**, Reiman discloses a process for preparing a separator including the steps of:

- a) including, as a glass fiber media stage in the separator, a glass fiber media stage (see col. 2, lines 50-51) prepared according to a process of:
  - 1) preparing an aqueous slurry including glass fibers (see col. 4, lines 24-25);
  - 2) forming a fiber matrix from the glass fibers in the aqueous slurry (see col. 2, lines 50-52);
  - 3) providing, from an aqueous system: a resin; and, an inorganic agent to precipitate the resin into the fiber matrix (see col. 3, lines 10-25); and,

Art Unit: 1723

- 4) curing the resin in the matrix with the inorganic agent present to form a glass fiber matrix with resin distributed therethrough (see col. 3, lines 32-41).

Reiman **lacks** the specific thickness of the glass fiber media stage, i.e., at least 12.7mm thick.

Reiman discloses a glass fiber media stage having a thickness. The specific thickness claimed by applicant, i.e., at least 12.7 mm thick, is considered to be nothing more than a choice of engineering skill, choice or design that a person having ordinary skill in the art would have found obvious during routine experimentation based among other things, on desired accuracy, since the courts have held that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than a prior art device, the claimed device was not patentably distinct from the prior art device (see *In re Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (FED. Cir. 1984), cert. Denied, 469 U.S. 830, 225 USPQ 232 (1984)).

With respect to **claim 36**, Reiman discloses a separator having at least one glass fiber media stage in accord with the process of claim 1 stated above (see col. 1, lines 20-35).

Furthermore, claim 36 is considered to be a product-by-process claim. Even though product-by-process claims are limited by and defined by the process,

Art Unit: 1723

determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (see *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)).

With respect to **claim 42**, Reiman discloses a process for preparing a separator including the steps of:

- a) including, as a glass fiber media stage (see col. 2, lines 50-51) in the separator, a glass fiber media stage having a thickness and made according to a process of:
  - 1) preparing an aqueous slurry including glass fibers and resin (see col. 4, lines 24-27); and,
  - 2) forming a fiber matrix having resin therein from the glass fibers in the slurry (see col. 4, lines 30-31).

Reiman **lacks** the specific thickness of the glass fiber media stage and the specific amount of resin, i.e., to provide a resin solids content within the range of 1.67g to 2.02g per gallon of water.

With respect to the specific thickness of the glass fiber media stage: It would have been obvious to provide a glass fiber media stage having a thickness of at least

12.7mm, as claimed by applicant, since a dimensional limitation is not sufficient to patentably distinguish over the prior art (see *In re Gardner v. TEC Systems, Inc.*, above).

With respect to the specific amount of resin: Reiman discloses a process where an amount of resin is added to aqueous slurry. Reiman lacks to mention the specific amount of resin. The specific range claimed by applicant, i.e., within the range of 1.67g to 2.02g per gallon of water, is considered to be the optimum range that a person having ordinary skill in the art would have been able to provide during routine experimentation, based among other things on the desired accuracy, since the courts have held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation (see *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)).

**Claim 43** adds the further limitations of wherein the slurry contains 7.6 grams of fibers per gallon of water; the slurry contains between 0.0625 g and 0.25 g of alum, per gram of fiber; and the slurry includes a resin content sufficient to provide 20% resin content in the fiber matrix

Reiman **lacks** the specific amounts of fibers, alum and resin.

The specific range amounts claimed by applicant are considered to be the optimum range that a person having ordinary skill in the art would have been able to provide during routine experimentation, based among other things on the desired accuracy, since the courts have held that where the general conditions of a claim are

Art Unit: 1723

disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation (see *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)).

With respect to **claim 44**, Reiman discloses a separator (see col. 1, lines 20-35).

Furthermore, claim 44 is considered to be a product-by-process claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (see *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)).

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiman (U.S. 3,142,612) in view of applicant's admitted prior art stated in the specification on page 1, lines 29-33 and page 2, lines 1-3 [hereinafter Prior Art].

**Claim 25** adds the further steps of: providing the inorganic agent, resin and glass fibers in an aqueous slurry; and, loading the fibers, resin and inorganic agent from the slurry onto a mandrel, by applying a vacuum draw to the mandrel, to form a fiber construction; with resin distributed therein.

Reiman discloses the step of providing the inorganic agent, resin and glass fibers in an aqueous slurry (see col. 4, lines 24-30), and forming a fiber construction, with resin distributed therein and drying said fiber construction (see col. 4, lines 30-40). Reiman **lacks** to disclose the step of loading the fibers, resin and inorganic agent from the slurry onto a mandrel, by applying a vacuum draw to the mandrel.

The Prior Art discloses a process, as shown in Fig. 1, including the step of loading the fibers from a slurry onto a mandrel, by applying a vacuum draw to the mandrel and then dry the mandrel with the fiber media. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to load the fibers, resin and inorganic agent from the slurry disclosed by Reiman onto a mandrel, as taught by the Prior Art in order to dry the fiber construction.

**Claim 26** adds the further limitation of providing glass fibers having lengths of less than 5 mm.

Reiman discloses providing glass fibers having different sizes (see col. 3, lines 48-49). Reiman **lacks** the specific length of the glass fibers.

It would have been obvious to provide glass fibers having lengths of less than 5mm, as claimed by applicant, since a dimensional limitation is not sufficient to patentably distinguish over the prior art (see *In re Gardner v. TEC Systems, Inc.*, above).



Claims 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiman (U.S. 3,142,612) in view of the Prior Art as applied to claim 6 above, and further in view of Smith et al. (U.S. 2,797,163) [hereinafter Smith].

**Claim 27** adds the further limitation of providing borosilicate glass fibers.

Reiman as modified by the Prior Art **lacks** the specific type of glass fibers.

Smith discloses a method of making a filter media, wherein glass fibers are used, preferably borosilicates. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use borosilicate glass fibers as taught by Smith in the process disclosed by Reiman as modified by the Prior Art since borosilicates are a conventional silicate that would be more economic to use (see col. 4, lines 25-32).

With respect to **claim 28**, Reiman discloses the inorganic agent is alum (see col. 3, lines 17-21).

With respect to **claim 29**, Reiman discloses providing as a resin, a latex resin (see col. 3, lines 10-16).

**Claim 30** adds the further limitation of wherein the resin is selected from the group consisting essentially of: acrylic-urethane hybrid latex and carboxy-modified acrylonitrile-styrene-butadiene latex.

Art Unit: 1723

**Claim 31** adds the further limitation of wherein the resin is selected from the group consisting essentially of: acrylic-urethane hybrid latex; carboxy-modified acrylonitrile-styrene-butadiene latex; and, a solution of substituted polycarboxylic acid with a polybasic alcohol cross linker.

With respect to claims 30 and 31: Reiman as modified by the Prior Art and Smith **lacks** the specific types of resin.

The MPEP 2144.07 states as obvious "The selection of a known material based on its suitability for its intended use". Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a the specific types of resin claimed by applicant as the latex resin disclosed by Reiman since that would be considered the preferred material used based on its suitability for its intended use, as along as the resin is a latex resin, as already suggested by Reiman.

Claims 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiman (U.S. 3,142,612) in view of the Prior Art and Smith (U.S. 2,797,163) as applied to claim 29 above, and further in view of Klein (Re. 31,849).

**Claim 32** adds the further limitation of the step of preparing an aqueous slurry including glass fibers includes adding glass fibers to water which has been pH adjusted to between 2.5 and 3.5.

**Claim 33** adds the further limitation of wherein the step of preparing an aqueous slurry including glass fibers includes adjusting a pH of water, to which the glass fibers are added, with sulfuric acid.

Reiman as modified by the Prior Art and Smith **lacks** the limitations of claims 32 and 33.

Klein discloses a process of making a gas-vapor treating mat including the step of preparing an aqueous slurry including glass fibers, said glass fibers being added to water which has been pH adjusted to 2.5 (see col. 8, lines 31-40). The pH of water is adjusted with sulfuric acid (see col. 8, lines 32-33). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to adjust the pH of the aqueous slurry disclosed by Reiman using sulfuric acid as taught by Klein in order to enhance the glass fibers dispersion (see col. 9, lines 48-55).

With respect to **claim 34**, Reiman discloses adding glass fibers to an aqueous system and dispersing the fibers with a mixer to form a dispersed fiber slurry (see col. 3, lines 1-5); and adding the resin and inorganic agent to the dispersed fiber slurry (see col. 3, lines 10-21).

With respect to **claim 35**, Reiman discloses providing a resin content such as to provide a resulting matrix with a resin content of no greater than 20% (see col. 4, lines 25-27).

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wisted et al. (U.S. 5,897,779) [hereinafter Wisted].

With respect to **claim 37**, Wisted discloses a device, as shown in Fig. 1, having a formed media tube having glass fiber media (see col. 9, line 1), resin and inorganic agent (see col. 13, lines 36-60).

Wisted **lacks** the specific thickness of the media, i.e., at least 12.7mm thick.

It would have been obvious to provide a media at least 12.7mm thick, as claimed by applicant, since a dimensional limitation is not sufficient to patentably distinguish over the prior art (see *In re Gardner v. TEC Systems, Inc.*, above).

Furthermore, claim 37 is considered to be a product-by-process claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (see *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)). In this case, the product is obvious from the prior art.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wisted (U.S. 5,897,779) in view of Smith (U.S. 2,797,163).

**Claim 38** adds the further limitations of wherein the glass fiber resin comprises borosilicate glass fibers; and, the inorganic agent comprises alum.

Wisted discloses the step of providing alum (see col. 12, lines 56-64). Wisted **lacks** the specific type of glass fiber, i.e., borosilicate glass fibers.

Smith discloses a method of making a filter media, wherein glass fibers are used, preferably borosilicates. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use borosilicate glass fibers as taught by Smith in the device disclosed by Wisted since borosilicates are a conventional silicate that would be more economic to use (see col. 4, lines 25-32).

Claims 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wisted (U.S. 5,897,779) in view of Smith (U.S. 2,797,163) as applied to claim 38 above, and further in view of Linnersten et al. (U.S. 6,485,535) [hereinafter Linnersten].

**Claim 39** adds the further limitations of the separator being an air/oil separator; and the at least one glass fiber media stage comprises a coalescing stage.

Wisted discloses a media that can be used in an air/oil separator (see col. 13, lines 19-26). Wisted **lacks** an air/oil separator and a coalescing stage.

Linnersten discloses air/oil separator, as shown in Fig. 2, having a filter media and a coalescing stage 22. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the media disclosed by

Art Unit: 1723

Wisted in an air/oil separator as taught by Linnersten in order to remove contaminants from air.

With respect to **claim 40**, Linnersten discloses a drain stage 23, and the coalescing stage 22 and the drain stage 23 being secured to a separator flange 29, as shown in Fig. 3.

With respect to **claim 41**, Linnersten discloses wherein the drain stage 23 comprises material selected from: non-woven polyester material, metal fibers; and, bonded glass fibers (see col. 3, lines 56-61).

### ***Double Patenting***

Claims 24-31, 34-37, 39, 40 and 42-44 of this application conflict with claims 1-26 of Application No. 11/253,842. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Madeline Gonzalez whose telephone number is 571-272-5502. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MG

  
Krishnam Menon  
Primary Examiner